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EXAMINER

CHEN, TSE W

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/753,798	Applicant(s) DOSSEY ET AL.	
	Examiner Tse Chen	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1-6,8-13,15-21,23 and 25 is/are rejected.
- 7) ☒ Claim(s) 7,14 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A dated April 5, 2004.
2. Claims 1-25 are presented for examination.

Claim Objections

3. Claim 17 is objected to because of the following informalities: “detecting the reverse bias state of the diode” should be “detecting the reverse bias state of the *at least one* diode”; and the last element “detecting the reverse bias state of the diode using a power loss sensor...” should be removed as it is similar to the previous element and “the communication circuitry” cited has no antecedent. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-6, 8-13, 15-16, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe and Cross as applied to claim 17 above, and further in view of Rosbury.
6. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Cross.

Findings

7. The rejections are supported by the following findings.
8. Watanabe, U.S. Patent 4467748, discloses:

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- 8.1. A method for power loss notification [col.1, ll.51-60].
- 8.2. The method comprising receiving at least a threshold voltage from a power supply [battery B] [col.4, ll.27-30; diode D1 allows threshold voltage to pass when power is switched on].
- 8.3. The method comprising charging at least one capacitor [C1] when the power supply is supplying at least the threshold voltage [col.4, ll.27-30].
- 8.4. The method comprising failing to receive at least a threshold voltage from a power supply [col.4, ll.42-44].
- 8.5. The method comprising after failing to receive at least the threshold voltage, reverse biasing at least one diode [D1] coupled between the power supply and the at least one capacitor [col.3, ll.62-63].
- 8.6. The method wherein receiving at least a threshold voltage from a power supply comprises receiving at least a portion of the threshold voltage at a power supply circuit [voltage regulator 22], the power supply circuit operable to generate a voltage signal [voltage regulator 22 outputs a regulated signal].
- 8.7. The power supply comprises a direct current power supply [battery B; col.4, ll.27-36; integral battery supplies DC power to charge capacitor].
- 8.8. At least one capacitor [C1] operable to store a voltage when a power supply [battery B] is supplying at least a threshold voltage [col.4, ll.27-30].
- 8.9. At least one diode [D1] coupled between the power supply and the at least one capacitor [fig.3].

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- 8.10. The diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage [col.4, ll.28-29].
 - 8.11. A resistor [R1] coupled in series with the diode [fig.3].
 - 8.12. A power supply circuit [voltage regulator 22] coupled in series with the diode [D1].
 - 8.13. The power supply circuit operable to receive at least a portion of the threshold voltage from the power supply [fig.3; voltage regulator receives threshold voltage when switch is on].
 - 8.14. A system for power loss notification [col.1, ll.51-60] comprising an apparatus [control circuit 6] operable to receive power from a power supply [battery B].
 - 8.15. The reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the apparatus [col.3, ll.62-63].
 - 8.16. The power supply [battery B] is integral with the apparatus [battery is an integral part].
9. Cross, U.S. Patent 4227141, discloses:
- 9.1. A method for detecting a power change in a charging system [col.1, ll.15-28] comprising a diode [208] and capacitor [210].
 - 9.2. The method comprising detecting the reverse bias state of the at least one diode at a power loss sensor [comparator 214] coupled in parallel to the at least one diode [208, fig.5; col.9, ll.37-41].
 - 9.3. A digital detector [comparator 214] detects the reverse bias state of the diode by detecting the presence or absence of a voltage between the diode and the power supply [battery 200] [col.9, ll.40-43].
 - 9.4. A power loss sensor [comparator 214] coupled in parallel with the diode [208, fig.5].

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9.5. The power loss sensor comprising a comparator [214] having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor [210] [fig.5].

9.6. The power loss sensor operable to detect a reverse bias state of the diode [col.9, ll.37-41].

9.7. The power loss sensor comprising a transistor [gate 42] coupled to an output of the comparator [col.9, ll.1-7].

10. Rosbury et al., U.S. Patent 4385384, hereinafter Rosbury, discloses:

10.1. A communication system comprising of a modem [remote modem 13] with a power loss sensor [power fail circuitry; col.19, ll.12-20].

10.2. The modem comprising communication circuitry [pulse generator 131, oscillator 127, and filter 129] operable to facilitate communication over a communication link [col.19, ll.22-30].

10.3. The power loss sensor coupled in series with the communication circuitry [fig.7].

10.4. The power loss sensor operable to signal the communication circuitry to communicate a power loss signal over the communication link [col.19, ll.20-34].

10.5. A power supply circuit to supply a voltage signal to the communication circuitry [fig.7; power supply voltage provided through a circuit in the broadest interpretation].

10.6. The power loss sensor operable to signal the apparatus [remote modem 13] to communicate a power loss signal to an external device [central modem 11] [col.19, ll.20-34].

10.7. A method for power loss notification [col.2, ll.21-25].

10.8. The method comprising supplying a voltage signal to the communication circuitry in the modem using at least a portion of the threshold voltage from the power supply [fig.7; power supply voltage may represent a portion of the threshold voltage].

Re Claims 17-21

11. In re claim 17, Watanabe discloses each and every limitation of the claim [findings 8.1-8.5], except for detecting the reverse bias state of the diode at a power loss sensor coupled in parallel to the diode. Cross teaches a method for detecting a power change in a charging system comprising detecting the reverse bias state of a diode at a power loss sensor coupled in parallel to the at least one diode in order to detect a power change [findings 9.1-9.2]. It would have been obvious to one of ordinary skill in the art, having the teachings of Watanabe and Cross before him at the time the invention was made, to modify the system taught by Watanabe to include the power loss sensor disclosed by Cross as the power loss sensor taught by Cross is a known configuration suitable for use as the power loss sensor for the system of Watanabe. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to detect a power supply loss with an existing diode.

12. As to claim 18, see finding 9.3.

13. As to claim 19, see findings 9.5-9.7.

14. As to claim 20, see finding 8.7.

15. As to claim 21, see finding 8.6.

Re Claims 1-6 and 23

16. In re claim 1, Rosbury discloses a modem with a power loss sensor coupled in series with the communication circuitry, the power loss sensor operable to signal the communication

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circuitry to communicate a power loss signal over the communication link [see findings 10.1-10.4]. Rosbury did not discuss the details of other components in the modem as related to the power loss sensor. Watanabe and Cross, as discussed above in reference to claim 17, combined teaches a system for power loss notification comprising at least one capacitor operable to store a voltage when a power supply is supplying at least a threshold voltage, at least one diode coupled between the power supply and the at least one capacitor, the diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage, a power loss sensor coupled in parallel with the diode, the power loss sensor operable to detect a reverse bias state of the diode, and the reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the apparatus [findings 8.8-8.10, 8.15, 9.4, 9.6]. It would have been obvious to one of ordinary skill in the art, having the teachings of Watanabe, Cross and Rosbury before him at the time the invention was made, to modify the system taught by Rosbury to include the system for power loss notification disclosed by Watanabe and Cross as the power loss notification system taught by Watanabe and Cross is a configuration suitable for detecting power loss for the communication system of Rosbury. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to detect a power supply loss and communicate the loss over a communication link.

17. As to claim 2, see finding 9.3.

18. As to claim 3, see finding 9.5.

19. As to claim 4, see finding 8.7.

20. As to claim 5, see finding 8.11.

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21. As to claim 6, see findings 8.12-8.13, and 10.5.

22. As to claim 23, see discussion above in reference to claim 17 and finding 10.4.

Re Claims 8-13 and 15-16

23. In re claim 8, Rosbury discloses a communication system comprising of a power loss sensor operable to signal an apparatus to communicate a power loss signal to an external device [see findings 10.6]. Rosbury did not discuss the details of other components in the modem as related to the power loss sensor. Watanabe and Cross, as discussed above in reference to claim 17, combined teaches a system for power loss notification comprising at least one capacitor operable to store a voltage when a power supply is supplying at least a threshold voltage, at least one diode coupled between the power supply and the at least one capacitor, the diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage, a power loss sensor coupled in parallel with the diode, the power loss sensor operable to detect a reverse bias state of the diode, and the reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the apparatus [findings 8.8-8.10, 8.15, 9.4, 9.6]. It would have been obvious to one of ordinary skill in the art, having the teachings of Watanabe, Cross and Rosbury before him at the time the invention was made, to modify the system taught by Rosbury to include the system for power loss notification disclosed by Watanabe and Cross as the power loss notification system taught by Watanabe and Cross is a configuration suitable for detecting power loss for the communication system of Rosbury. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to detect a power supply loss and communicate the loss over a communication link.

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- 24. As to claim 9, see finding 9.3.
- 25. As to claim 10, see finding 9.5.
- 26. As to claim 11, see finding 8.7.
- 27. As to claim 12, see finding 8.11.
- 28. As to claim 13, see findings 8.12-8.13, and 10.5.
- 29. As to claim 15, see finding 8.7.
- 30. As to claim 16, see finding 9.4.

Re Claim 25

- 31. In re claim 25, Rosbury discloses a method for power loss notification for a modem with a power loss sensor coupled in series with the communication circuitry [finding 10.3], the method comprising supplying a voltage signal to the communication circuitry in the modem using at least a portion of the threshold voltage from the power supply [10.1, 10.7-10.8]. Rosbury did not discuss the details of other components in the modem as related to the power loss sensor. Watanabe and Cross, as discussed above in reference to claim 17, combined teaches a method for power loss notification comprising receiving at least a threshold voltage from a power supply, charging at least one capacitor when the power supply is supplying at least the threshold voltage, failing to receive at least a threshold voltage from a power supply, after failing to receive at least the threshold voltage, reverse biasing at least one diode coupled between the power supply and the at least one capacitor [findings 8.2-8.5], detecting the reverse bias state of the at least one diode at a power loss sensor coupled in parallel to the at least one diode, the power loss sensor comprising a comparator having a first input coupled between the power supply and the diode and a second input coupled between the

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diode and the at least one capacitor, and the power loss sensor comprising a transistor coupled to an output of the comparator [findings 9.2, 9.5, 9.7]. It would have been obvious to one of ordinary skill in the art, having the teachings of Watanabe, Cross and Rosbury before him at the time the invention was made, to modify the system taught by Rosbury to include the system for power loss notification disclosed by Watanabe and Cross as the power loss notification system taught by Watanabe and Cross is a configuration suitable for detecting power loss for the communication system of Rosbury. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to detect a power supply loss and communicate the loss over a communication link.

Allowable Subject Matter

32. Claims 7, 14, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
33. Claim 24 is allowed.
34. The following is a statement of reasons for the indication of allowable subject matter: the claims are allowable because none of the references, either alone or in combination discloses or renders obvious “a power monitor coupled in series with the communication circuitry, the power monitor operable to generate a reset signal when the voltage signal supplied by the power supply circuit to the communication circuitry falls outside an acceptable voltage range”.

Response to Arguments

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35. Applicant's arguments with respect to claims 1, 8, 17, 24, and 25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

37. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (703) 305-8580. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
June 7, 2004


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